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Some North American Botanists.

IX. LEWIS DAVID DE SCHWEINITZ.

BY A. P. MORGAN.

A little sketch of the labors of the celebrated de Schweinitz in the department of mycology, may give some notion of the large and varied field of natural objects open to the eyes of the inquiring botanist in every locality, and may also give good encouragement as to the amount that may be accomplished by working therein, provided the work be done in a persistent and systematic way.

It is greatly to be desired that some one, as Mr. Rau, in a position to obtain the facts, should give us an extended account of the life and labors of this great botanist. In so far as I may touch upon his biography, I quote from memory and aim only to be generally correct, but, in reference to his labors, I have before me the "*Synopsis Fungorum in America Boreali media degentium*," communicated to the American Philosophical Society, Philadelphia, 15 April, 1831.

Lewis David de Schweinitz was born at Bethlehem, Pa., in 1794, and sent to Europe to receive his education. He there distinguished himself in mycologic studies, and with Albertini, published the "*Conspectus Fungorum in Lusatia superiori*." Returning to his native land, he settled at Salem, N. C., where he remained a few years. The results of his mycologic studies in this locality were published at Leipsic, in 1818, by his friend, the celebrated Schwaegrichen, as "*Synopsis Fungorum Carolinæ Superioris*." In 1821 he returned to his native village in Pennsylvania, where his delightful studies were continued till his death, which occurred, I think, in 1834. He enjoyed the friendship of the most distinguished botanists of his time, both in Europe and in this country. With the vigorous prosecution of studies in Fungology, his merits as a close and careful student

of nature and his important contributions to botanical knowledge will be recognized.

The *Synopsis Fungorum in America Boreali* enumerates more than three thousand species, divided among the classes as follows:

Hymenomyces	1146
Pyrenomycetes	1055
Gasteromyces	297
Hyphomyces	312
Gymnomyces	289
	3099
Total	3099

Of these 1216 are new species, natives of America, while the remaining 1883 are identical with European forms; that is, 40 per cent. are native species, and 60 per cent. common to both countries. The great genus *Sphæria* alone contains 680 species, of which 387 are new. *Peziza* stands with 213 species, 58 of them new. *Polyporus* contains 153 species, 41 new. But it seems rather singular that he should not have been able to add more than 14 new species to the great genus *Agaricus*. The labor on these plants seems to have been reserved for our own time. Prof. Charles H. Peck, in his reports up to date, enumerates 525 species of *Agaricini*, of which 272 are new.

After his return from Europe how de Schweinitz must have reveled in the novelties of the New World! With what delight he must have beheld the magnificent *Agaricus illudens*, and with what wonder the singular *Mitromyces lutescens*! With what pleasure he must have gathered the first specimens of the fairy *Peziza floccosa*!

The system in which his plants are enrolled is partly that of Fries and partly that of older botanists; he did not have access to the third volumes of the *Systema Mycologicum*. In the elucidation and rearrangement of his species a very inviting field and a meritorious work is open to the systematic Fungologist. Many changes are being made and much new discovery; the great genus *Sphæria* is now broken up into orders and numerous genera. It seems singular that the Fungi that can be perfectly preserved, that are the most easily studied, should be in such a chaotic state of classification.

It is to be regretted that de Schweinitz has not given us more of his views on the life-histories of the Fungi, which are so interesting at this time; his maturity of observation would undoubtedly have enlightened many dark points. It is a signifi-

cant fact, for example, that while he mentions *Puccinia graminis* as "vulgatissima in graminibus," he does not chronicle *Æcidium Berberidis*.

The herbarium of de Schweinitz rests in the Academy of Natural Sciences, Philadelphia. It is very much to be desired that a reprint be made of the *Synopsis Fungorum*, as it is practically inaccessible to the ordinary student. Still more desirable is it that a *Synopsis Fungorum* be compiled that shall include all the North American species identified and described up to the present time, and which now, perhaps, more than double in number the enumeration of de Schweinitz.

A Botanical Holiday in Nova Scotia. II.

BY T. J. W. BURGESS, M. D.

By June 21st we had exhausted the time laid out to be spent in the neighborhood of Halifax, and taking the Windsor and Annapolis Railway to the latter place, caught the steamer crossing to Digby. Here we were first able truly to realize the wonderful rise of the tide in the Bay of Fundy, our landing being made from the *hurricane* deck, then *below* the level of the wharf. Quitting the boat for the rail again, we were soon on a road, the Southern Counties, which we concluded to be chiefly remarkable for the slow rate at which it could travel, no less than four and a half hours being taken to cover the 65 miles between Digby and Yarmouth.

At Yarmouth, the most southern point touched in our trip, we had expected to find considerable change in the vegetation, but this was less marked than we had looked for, so that a considerable part of the four days spent here was devoted to mounting sea-weeds and drying the plants, of which we had a very large accumulation on hand. A modification of Mr. Macoun's method of drying mosses was tried on flowering plants and found to work most successfully. Our hotel being provided with an unroofed balcony, as soon as the sun had thoroughly heated the floor of this, we took our plants, and placing each sheet of specimens between two driers, covered the floor with a layer, small stones at the corners of the sheets preventing their disturbance by the wind. Only one thickness was spread at a time, and no pressure used except the weight of the single drier covering the specimens. The plan was admirable for plants wilted by a couple of days in press, an hour under a hot sun serving to completely cure specimens that would have taken four or five days changing;